

Proposed Training Curriculum for Additional M&V Training

Purpose: to augment currently available ASHRAE or AEE training on performance contracting and M&V, but be focussed on FEMP program. (ASHRAE course is on performance contracting, M&V is not treated in enough detail that attendees learn how to do M&V. This course is to provide that training and experience.)

Duration: ½ to 1 day after AHSRAE or AEE sessions.

Course Materials:

Handouts:

- Information Sheet – containing web addresses, etc.
- Detailed Guideline
- M&V Sample Plans
- Case Study
- Responsibility Matrix

Course Curriculum Outline:

I. Introduction (15 minute)

- Purpose of course: to improve attendee's understanding of M&V, how to develop and implement M&V plans, understand M&V materials (such as differences with IPMVP, ASHRAE14P), and gain some experience in developing M&V plans
- Description of course contents and activities
- Describe what attendees should leave with at end of course
- Pass around attendance sheet (make copies for others?)

II. Review (1 hour)

- Review highlights from ASHRAE and AEE courses on performance contracting and M&V (slide presentation)
- Discussion of differences of FEMP Guidelines, IPMVP and ASHRAE 14P
 - Generally FEMP guidelines have more detailed requirements than IPMVP, less than 14P
- Present M&V 'Best Practices' slideshow
- Present Course materials, review them

III. M&V in SuperESPC Projects (1 hr)

Initial proposal M&V

- Level of detail
- Typical M&V Options
- Included elements
- Examples from real projects

M&V after Detailed Energy Survey (focus of this course)

- Baseline better defined
- Assumptions identified, etc.
- Examples from real projects

Activities and Reports

- After project installation/commissioning
- Annual performance check and savings calculations

IV. Development of an M&V plan for a selected project (can be lighting, HVAC, controls, or combo) (1 hr)

- Divide class in two – ½ are "Agencies," ½ are the "ESCO."
- Have a facilitator for both groups.
- Provide class with information sheet that describes the facility, utility bills, equipment, age, occupancy, baseline information, options for fixture replacements, information on measurement devices, ESCO labor rates, etc.

- Can have them develop M&V with different options and compare withing group, then compare from Owner and ESCO perspective.
- Summarize key activities, risks and responsibilities among the plans (non-judgmental!)
- Attendees should come away with different perspectives on M&V.